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ABSTRACT

The document contains summaries of over 50 publicly available publications which support the case for early intervention for handicapped children and their families. Section 1 contains studies pertaining to the effectiveness of any intervention. This section also describes projects approved by the United States Department of Education's Joint Dissemination Review Panel (JDRP). Section 2 covers materials that present little or no data but offer persuasive arguments in favor of intervening early with handicapped and at-risk children. A third section addresses the economics of early intervention. Section 4 contains references of collections of information. A final section offers abstracts of the four Early Childhood Research Institutes funded by Special Education Services, U.S. Department of Education--Research on the Early Abilities of Children with Handicaps (Project REACH), Kansas Research Institute for the Early Childhood Education of the Handicapped, Institute for the Study of Exceptional Children, and Carolina Institute for Research on Early Education for the Handicapped (CIREEH). Among the publications abstracted are the following: "Early Intervention with the Young Severely Handicapped Child" (D. Bricker, M. Dow); "The Milwaukee Project--A Study of the Use of Family Intervention to Prevent Cultural-Familial Mental Retardation" (R. Heber, H. Garber); "The Effects of Early Childhood Educational Intervention on School Performance" (F. Palmer); and "The Ypsilanti Perry Preschool Project--Preschool Years and Longitudinal Results" (D. Weikart, et al.). (SW)

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Benefits of Early Intervention for Special Children

Pamela W. Bailey
Pascal L. Trohanis

TADScripts '82

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March 1982

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3. Institute for the Study of Exceptional Children Princeton, New Jersey; New York City 90

4. Carolina Institute for Research on Early Education for the Handicapped (CIREEH) Chapel Hill, North Carolina 92

Introduction

- What research about the benefits of early intervention can be reviewed for possible inclusion in my position paper?
- Which preschool practices exist that can be replicated in our locale?
- What can we tell the school board about costs for preschool services?
- What persuasive literature or audiovisual materials are available to incorporate in my agency's testimony?
- Where can I find readily accessible material that I can refer to or offer to parents and others?

During the past year, the Technical Assistance Development System (TADS) received numerous requests like these for sources of information about the benefits of serving young handicapped children and their families. To help planners, providers, and advocates gain access to ideas for such diverse uses, we have compiled this document.

This document contains summaries of publicly available materials which can be used to support the case for early intervention. Over fifty annotations have been prepared that represent a cross section of five types of materials. First, we include some of the very early and more recent key studies pertaining to the effectiveness of early intervention. In this category we also cite the names and describe briefly projects approved by the U.S. Department of Education's Joint Dissemination Review Panel (JDRP). Second, we

abstract materials that present little or no data but offer persuasive arguments in favor of intervening early with handicapped and at-risk children. Third, we address the economics of early intervention -- the issue that speaks loudly to those who determine how our tax dollars are spent. In the fourth section, we reference collections of information. Finally, we include abstracts of the four Early Childhood Research Institutes funded by Special Education Services (SES), U.S. Department of Education. The abstracts are reprinted from SES's 1981-82 Handicapped Children's Early Education Program Overview & Directory.

In selecting materials for inclusion, we drew from our files, from our colleagues at TADS, from our professional contacts, and from the recent literature in the field. The scope of this bibliography is broad, however, limited resources and time forced us to limit the number of materials to review and abstract. We apologize to any authors whose work may have been overlooked.

We hope our readers will find this document a useful resource, and we look forward to your feedback.

Pamela W. Bailey
Pascal L. Trohanis

I. PUBLISHED RESEARCH/DATA-BASED STUDIES

THIS SECTION IS DIVIDED INTO TWO PARTS. PART A, "PUBLISHED RESEARCH," CONTAINS SUMMARIES OF STUDIES CARRIED OUT TO TEST THE EFFECTIVENESS OF EARLY INTERVENTION PROGRAMS. MOST OF THE WORKS CONTAINED IN THIS PART ARE FOLLOW-UP OR LONGITUDINAL STUDIES.

PROGRAMS SERVING YOUNG SPECIAL CHILDREN EXIST THROUGHOUT THE COUNTRY. ONE OF THE PRIMARY FEDERAL FUNDING SOURCES FOR DEMONSTRATION PROJECTS AIMED AT DEVELOPING MORE AND BETTER SERVICES HAS BEEN THE HANDICAPPED CHILDREN'S EARLY EDUCATION PROGRAM (HCEEP). PART B OF THIS SECTION CONTAINS BRIEF DESCRIPTIONS OF THOSE HCEEP PROGRAMS WHICH HAVE EARNED THE ENDORSEMENT OF THE DEPARTMENT OF EDUCATION'S JOINT DISSEMINATION REVIEW PANEL (JDRP). TO OBTAIN SUCH VALIDATION, DOCUMENTED EVIDENCE OF PROGRESS OR GAINS BY PROJECT ENROLLEES MUST BE PRESENTED FOR SCRUTINY AND APPROVAL BY A MAJORITY OF THE ATTENDING PANEL MEMBERS. FOR MORE DETAILED INFORMATION ABOUT EACH PROGRAM, CONTACT EACH PROJECT DIRECTLY (USE THE ADDRESSES AND TELEPHONE NUMBERS PROVIDED).

A. PUBLISHED RESEARCH

1. Beller, E. K. Research on Organized Programs of Early Education. In R. M. W. Travers (Ed.), Second Handbook of Research on Teaching. Chicago: Rand McNally, 1973.

This chapter presents a detailed overview of issues and research on the effects of early education as of 1973. Though much research has been conducted since this time, this 70-page paper is useful as an historical record and as a high quality discussion of considerations in the evaluation of early intervention research.

In the course of this paper the author reviews research on educational programs for infants, longitudinal impact studies, early education programs (preschool age), comparative impact research, and an analysis of the teaching process. The author concludes that persons interested in the effects of early intervention should ask questions such as "How does a given technique of teaching affect child A differently from child B?" rather than "Do children benefit more from teaching technique A than from teaching technique B?" Of particular concern should be the quality of the teacher-child relationship regardless of the theoretical orientation of a given program.

2. Bricker, D. D. & Dow, M. G. Early Intervention with the Young Severely Handicapped Child. Journal of the Association for the Severely Handicapped, 1980, 5(2), 130-142.

This article concerns a program developed for young severely retarded children. The authors discuss the rationale and program characteristics and include child progress data. The center-based program includes a classroom for direct intervention, parent activities, support services, instructional procedures, and an evaluation component.

Of the 50 children served by the project for a minimum of eight months, all made significant gains. Eighty-eight percent of the children were placed in public schools upon termination of the experimental program; four percent were placed in group homes; two percent attended a Head Start program; and six percent remained in affiliated center programs. Only two of the 50 children were later enrolled in residential institutions while the remaining 48 stayed in their own homes or foster homes.

3. Fredericks, H. D., Moore, M. G., & Baldwin, V. L. The Long-Range Effects of Early Childhood Education on a TMR Population. In Proceedings of a symposium in honor of Alice H. Hayden: Serving Young Handicapped Children -- Issues and Research. February 21-22, 1980, University of Washington, Child Development and Mental Retardation Center: Seattle (in press).

This 37-page paper is the account of an ex post facto research effort which attempted to detect the differences, if any, between TMR children who had received preschool experiences and those who had not. The subjects were 9-, 10-, and 11-year-old children enrolled in TMR classrooms, their teachers, and their parents.

Five research questions deal with valuable features of preschool programs; post-preschool relationships with parents, teachers, and peers; and teacher attitueds toward preschool education.

-- Children who attended preschool for two or more years scored significantly higher in the areas of language, academics, self-help, and motor skills than their nonpreschool-educated counterparts.

-- The amount of individual and group instruction and the consistency of instructional cues and feedback impacted greatly upon skill acquisition.

-- Teachers did not differentiate (on the basis of general behavior, interactive responses, and general functional level) between those children who had received preschool experience and those who had not.

-- Parent reports indicated that preschool-educated children had more self-help skills, were less of a physical drain on their parents, and were less likely to make their parents angry than their nonpreschool-educated counterparts.

-- Teachers reported paradoxical feelings toward the benefits of preschool education but generally expressed positive attitudes.

4. Gray, S., Ramsey, B., & Klaus, R. From Three to Twenty: The Early Training Project. Baltimore: University Park Press, 1981.

This 304-page book is a longitudinal follow-up covering a group of low-income and socially disadvantaged people from 1962 to 1978, ages 3 to 20 years. Its purpose is to trace the long-term effects, if any, of early intervention. Interview data from both parents and youngsters are reported and interpreted, as well as educational achievement and cognitive and social development data. These data sets help address such issues as the optimal age of intervention, parental effects, and long-term effects.

This major work is preceded by a study reported in: Gray, S., & Klaus, R. The Early Training Project: A Seventh Year Report. Child Development, 1970, 41, 909-924.

5. Heber, R. & Garber, H. The Milwaukee Project: A Study of the Use of Family Intervention to Prevent Cultural-Familial Mental Retardation. In B. Z. Friedlander, G. M. Sterritt & G. E. Kirk (Eds.), Exceptional Infant (Vol. 3). New York: Brunner/Mazel, 1975.

This 35-page chapter describes the effects of a comprehensive early intervention program, The Milwaukee Project, on children at risk for cultural-familial mental retardation (CFMR). The project provided a comprehensive intervention program which involved the mother and infant in separate services. Children who were thought to be at risk for cultural-familial retardation on the basis of their mother's IQ (less than 75) and their place of residence were assigned to either the experimental or control group. The children who were placed in the experimental groups and their mothers received the benefits of the program.

The Maternal Rehabilitation Program focused on preparing mothers for employment, and improving their homemaking and childrearing skills. The Infant Intervention Program, in which infants were enrolled between the ages of 3 and 6 months, had several progressive stages. From the time of entry until about age 12 months, infants were cared for on a one-to-one basis by the same teacher. Gradually the children were eased into pairs under the care of one teacher, then into a group under the direction of three teachers. At 20 to 24 months, the children began a full-day preschool program which had a cognitive-language orientation.

Children in both the experimental and control group were tested on measures of intelligence, learning, language, and social skills. In all cases, performance of children in the experimental group was shown to be superior to that of children in the control group. Large differences in IQ levels of the two were reported.

The results of this study have been challenged by other researchers on the basis of inadequate or inappropriate methods of assigning treatment groups, testing subjects, and specifying treatments. One such criticism is Ellis B. Page's article, "Miracle in Milwaukee." The full citation follows:

Page, E. B. Miracle in Milwaukee. In B. Z. Friedlander, G. M. Sterritt, & G. E. Kirk (Eds.), Exceptional Infant (Vol. 3). New York: Brunner/Mazel, 1975.

6. Lazar, I., Hubbell, V. R., Murray, H., Rosche, M., & Royce, J. Summary Report: The Persistence of Preschool Effects (U.S. Department of Health, Education and Welfare Publication No. [OHDS] 78-30129). Washington, DC: U.S. Government Printing Office, 1977.

This document is the outgrowth of a study conducted as a collaborative effort by the Consortium on Developmental Continuity, a dozen investigators who agreed to collect common follow-up data to be analyzed by a single outside group. The 31-page report summarizes the findings of 14 longitudinal studies of children from low-income families who participated in experimental infant and preschool programs over a 15-year period. The projects submitting data were center based, home based, or a combination of the two. Each project studied had fulfilled specific criteria in program planning, staff training, program supervision, program evaluation, and child follow-up.

Data for the study were collected in two stages. First, the original data on the children (IQ, achievement, other psychological test data, and demographic information) which had been collected independently by the projects were duplicated and sent to a central office. Second, each project collected current follow-up data using common forms developed by the consortium. These included a parent interview, a youth interview, school record and achievement test forms, and the age-appropriate Wechsler Intelligence Test. The limitations of this kind of study, which is essentially a secondary analysis of the data, are discussed.

The conclusions drawn by the consortium on the basis of the data analyses are as follows:

1) Children receiving infant and preschool services have a reduced probability of being assigned to special education classes or of being held back in grade. Either reduction constitutes a substantial cost reduction for the school system.

2) Low-income adolescents who attended preschool rate themselves higher in school competence than comparable adolescents who did not receive early education.

3) The IQ scores of low-income children who attended preschool are significantly higher than those children who did not, at least during the critical years of the primary school grades.

The authors contend that the most important conclusion reached to date from this body of data is that "well-run early education programs can in some way improve the ability of low-income children to meet the requirements of their schools" (p. 29).

In conclusion, the authors offer recommendations for national policies and programs based on the findings of this study.

7. Macy, D. J., & Carter, J. L. Triple T Infant Consortium Follow-up Study. Dallas: Macy Research Associates, 1980.

This 102-page report is the result of a research effort carried out by the Triple T Infant Consortium, an organization formed by Texas infant projects to increase awareness about early intervention and to provide directives for future programming decisions.

The purpose of the study was twofold: (1) to determine the service placements of infants and toddlers after graduation or exit from an early intervention program and (2) to assess the costs of intervention programs for handicapped infants and toddlers.

Data were collected via two survey forms completed by participating projects. Traditional precautions to insure the reliability and validity of data were not intact due to the limited budget of the study. For more than three-fourths of the graduates, follow-ups took place within three years after leaving the project.

Results of the study indicated that 77 percent of the children followed were attending a public or parochial school; seven percent were attending a normal day-care facility; four percent were in a special service center; four percent were in residential institutions; and eight percent were receiving no services.

The cost information was collected only from the early intervention projects and was studied in terms of salaries and consultant fees and did not include costs for facilities, equipment, etc. The cost findings were consistent with other reported costs of early intervention programs.

8. Palmer, F. A. The Effects of Early Childhood Educational Intervention on School Performance. Prepared for the President's Commission on Mental Health, Washington, D.C.: U. S. Government Printing Office, July 1977.

This 83-page position paper was prepared at the request of the President's Commission on Mental Health in spring of 1977. It begins with a review of the history of early education, emphasizing the educational climate affecting many governmental decisions on early education. Following this review, the author examines the cumulative data resulting from 10 longitudinal studies of early intervention. Together these studies, selected for the careful research design and evaluation procedures inherent in each, make a compelling case for early education for the handicapped.

Results show experimental groups were significantly less likely to have been retained in grade or to be assigned to special education classes. By the time the subjects were in their teens, they scored significantly higher on IQ and arithmetic achievement tests. Though not at a statistically significant level, the subjects also scored higher on measures of reading achievement than did controls. In retrospect, parents were uniformly positive about the early intervention programs their children had attended.

Again using the data from these studies, the author discusses the critical or ideal aspects of successful programs. A conclusion reached was that intervention at any age prior to school has been shown to benefit the child. The importance of the duration of intervention, or the number of years prior to public school entry, was investigated also.

Again, the data are inconclusive, neither supporting nor refuting the hypothesis: the more intervention the better.

In an attempt to determine what type of intervention (home based, center based, or combination) was superior, the author looked at grade retention, enrollment in special education classes, reading achievement, arithmetic achievement, and intelligence scores of the subjects enrolled in each of the various types of programs. Across all variables, there seemed to be no reason to conclude that one type of intervention was superior to another.

Other program variables such as individual vs. group training, hours per week of intervention, and amount of family involvement were examined also. Among these, the data were confounded and thus inadequate for drawing any broad conclusions.

The author concludes the paper by discussing a number of issues for which the data have implications and makes a number of recommendations for initiating a comprehensive early childhood program.

9. Ramey, C.T. & Haskins, R. The Causes and Treatment of School Failure: Insights from the Carolina Abecedarian Project. In M. Begab (Ed.), Psychosocial Influences and Retarded Performance: Strategies for Improving Social Competence (Vol. 2). Baltimore: University Park Press, 1981.

This 24-page chapter provides a progress report on the longitudinal intervention and research programs which began in 1972 at the University of North Carolina at Chapel Hill and discusses results from both. This interdisciplinary project was designed to promote normal intellectual and social growth in young children at risk for psychosocial retardation and school failure. Also, this effort sought to understand better the development of these children and the ecological influences/conditions on them and their families.

Following a short review of previous research, the authors describe the intervention program. They cover the admission of families, the intervention program with some coverage of meetings with classroom teachers and caregivers, and learning activities.

The chapter also discusses a series of studies of settings that shape the child's development. Studies discussed include the family (mother-child relationship; home stimulation; household composition and relatives), neighborhood, and school.

The authors conclude center-based infant and preschool education "can prevent developmental retardation among high-risk children during the preschool years. Furthermore, the advantage seems to include a wide range of discrete mental abilities." Other insights are summarized.

10. Skeels, H. M., & Dye, H. B. A Study of the Effects of Differential Stimulation on Mentally Retarded Children. Journal of Psychoasthenics, 1939, 44, 114-136.

This 23-page article reviews the findings of a study which involved altering the environments in which children were reared. Thirteen mentally retarded children under the age of 3 who were living in a relatively nonstimulating environment (an orphanage) were transferred, singly or in pairs, to wards comprised of older brighter mentally retarded girls and women. In every case, the children were the targets of much attention, and intense relationships developed between each child and one or two individuals on the ward. In comparison to the orphanage, the ward environment was quite stimulating. A contrast group of 12 children with higher IQs remained in the orphanage.

Over a two-year period, the children in the experimental group gained an average of 28.5 IQ points, while the children in the contrast group showed a nearly equal decline.

This study clearly documents the importance of a nurturing, stimulating environment, and the critical nature of an intense relationship between a child and one or two older persons.

Two follow-up studies (one carried out two and one half years later and the other approximately 20 years later) of this research were conducted. These are discussed in the reference on the next page.

11. Skeels, H. M. Adult Status of Children with Contrasting Early Life Experiences: A Follow-Up Study. Monographs of the Society for Research in Child Development, 1966, 31(3), 1-57.

This 57-page article contains summaries of three separate studies of the same subjects carried out for 30 years. The original study was done in the early 1930s. The first follow-up study was begun two and one half years after the close of the first experimental period. The second follow-up study was carried out approximately 20 years later.

In the original study, 13 children under the age of three whose mental development was seriously delayed comprised the experimental group. These children were moved from a relatively unstimulating institutional environment to a developmentally stimulating ward of older mentally retarded girls and women where intense relationship developed between each child and one or two of the older individuals. The contrast group, comprised of 12 children of higher intelligence, remained in the original unstimulating orphanage.

Over a two-year period, the children in the experimental group showed an average IQ gain of 28.5 points, while the contrast group showed a decline of 26.2 IQ points.

Two and a half years later, a follow-up study of the children was initiated. By this time, 11 of the 13 experimental children had been placed in adoptive homes. The adopted children had maintained and increased their rate of mental growth, while the IQs of the two unadopted and still institutionalized children had declined. The

children in the contrast group showed a slight mean gain in IQ but were still marekdly retarded.

In the adult follow-up study initiated after a lapse of 21 years, the two groups were found to have maintained their differences. All of the subjects in the experimental group were found to be self-supporting in occupations ranging from professional and business employment to domestic positions. In the contrast group of 12 children, four were still wards of institutions, and one other had died at age 15. Of those subjects in the contrast group who were released from the institution, all but one (who became a skilled technician) were employed as unskilled laborers.

Of the 13 subjects in the experimental group, 11 had married. Twenty-eight children, all normal, had been born of these marriages. of the two subjects in the contrast group who married, one had one mentally retarded child and was divorced. The other married (contrast-group) subject had been placed as a child in an advantageous setting. He later matured into a self-supporting skilled technician with a stable marriage and four normal children.

A cost analysis revealed that the cost of caring for those subjects in the contrast group was five times greater than the cost for the experimental group.

12. Stedman, D. J. Early Childhood Intervention Programs. In B. N. Caldwell & D. J. Stedman (Eds.), Infant Education: A Guide for Helping Handicapped Children in the First Three Years of Life. New York: Walker and Company, 1977.

This article discusses the results of a survey commissioned in 1972 by the Secretary of HEW to review the effectiveness of early education intervention programs. The major focus of the study was on those programs which served high-risk, preschool-aged children. The 12-page article reviews the study findings and discusses in depth many problems with present intervention efforts which make clear documentation of effectiveness difficult.

An examination of the literature, on-site visits, and interviews with other researchers revealed that early intervention programs do have positive effects on young at-risk children. The experience received is more or less effective for an individual child due to a "host of factors, including child variables, setting variables, and the characteristics of the intervention program and the people delivering it" (p. 12).

The data interpretation resulting from these studies is difficult because of the inability to control child and setting variables and the lack of adequate tools to measure differences in children and adults.

13. Stock, J. R., Newborg, J., Wnek, L. L., Schenck, E. A., Gabel, J. R., Spurgeon, M. S., & Ray, H. W. Evaluation of Handicapped Children's Early Education Program (HCEEP) Final Report. Columbus, OH: Battelle Center for Improved Education, 1976.

In September 1973, the U. S. Bureau of Education for the Handicapped (now, Special Education Services) contracted with Battelle Memorial Institute, Columbus, Ohio, to conduct an evaluation study of the Handicapped Children's Early Education Program (HCEEP). This two-volume report states the findings of that study. It covers the results of analyses carried out to determine the effects of HCEEP projects on child growth, the accuracy of stated handicapping conditions and service needs, and program impact on the parents of children served. The study also investigated project costs, status of project graduates, and program dissemination strategies. The findings indicate the HCEEP programs have a positive impact on the children they serve and their parents. The report also specifies a proposed system for continually monitoring HCEEP effectiveness.

The report is available through the ERIC system, No. ED-125-165.

14. Weikart, D. P., Bond, J.T., & McNeil, J. T. The Ypsilanti Perry Preschool Project: Preschool Years and Longitudinal Results through Fourth Grade. Ypsilanti, MI: High/Scope Educational Research Foundation, 197°.

This 142-page monograph is an account of the longitudinal study carried out by researchers associated with the Ypsilanti Perry Preschool Project. It reports the findings on the then fourth-grade students who had attended the preschool.

The Ypsilanti Perry Preschool Project was designed to build the cognitive skills and attitudes of disadvantaged children to prevent adolescent delinquency and school dropout. Experimental and control children were matched and selected on the basis of IQ and family SES.

The interim data indicate the project is meeting its objectives. During preschool, the experimental group made substantial gains in both IQ and aptitude scores, but these gains generally faded one or two years into public schooling. However, differences in academic achievement between the two groups actually increased over time. Teacher ratings of social-emotional adjustment consistently favored the experimental group, often at significant levels. By the third grade, significantly more children from the experimental group were performing at grade level and in regular rather than special education classes. An economic analysis of the preschool experience showed the intervention program more than paid for itself.

B. JDRP-APPROVED PROGRAMS

1. Central Institute for the Deaf Early Education Project

Address	Telephone
818 S. Euclid St. Louis, Missouri 63188	314-652-3200

Program Description

This center-based program serves infants and preschoolers birth to age four years. The children served are deaf or hard of hearing.

* * *

2. Cognitiveiy Oriented Preschool Curriculum

Address	Telephone
600 North River Street Ypsilanti, Michigan 48197	313-485-2000

Program Description

The project operates a classroom in which handicapped and non-handicapped children learn together. The project-developed Cognitively Oriented Preschool Curriculum, based on Piaget's child development theory, is used in the classroom.

3. Communication Programs

Address

Experimental Education Unit,
WJ-10
Child Development and Mental
Retardation Center
University of Washington
Seattle, Washington 98195

Telephone

206-543-4011

Program Description

This project, part of the Model Preschool Center for Handicapped Children, serves children birth to age six years who have language and communication problems.

* * *

4. A Comprehensive Program for Handicapped Preschool Children and Their Families in Rural and Non-Urban Areas

Address

108 S. Eighth St.
Fargo, North Dakota 58103

Telephone

701-237-4513

Program Description

This project offers home- and center-based services to multihandicapped infants and preschoolers who reside in rural areas.

5. Comprehensive Training Program for Infant and Young Cerebral Palsied Children

Address

9001 W. Watertown Plank Road
Wauwatosa, Wisconsin 53226

Telephone

414-259-1414

Program Description

The project offers speech and occupational therapy, nutrition, psychology, special education, and social and medical services to children with neuromotor disabilities.

* * *

6. DEBT Project

Address

1628 19th Street
Lubbock, Texas 79401

Telephone

806-747-2641 ext. 455

Program Description

The project operates a home training program for children with developmental delays and their families. In addition to providing a home instructional program for parents, the project provides medical evaluations for referred children and promotes the use of services offered by the state and community.

7. Diagnostic Prescriptive Preschool Classroom

Address

2215 N.W. Northrup, Second Floor
Portland, Oregon 97210

Telephone

503-229-7220

Program Description

This hospital-based program serves infants birth to age 18 months who are developmentally delayed, visually or hearing impaired, or who have motor or neurological handicaps. The program works directly with parents and trains them to carry out specific intervention strategies with their child at home. Infants and parents attend a center-based program weekly where they work with a transdisciplinary team on an individually prescribed activity.

* * *

8. Project ERIN: Early Recognition Intervention Network

Address

376 Bridge Street
Dedham, Massachusetts 02026

Telephone

617-329-5529

Program Description

Project ERIN serves mildly to severely handicapped children. The program operates in the home and at school and requires heavy parent involvement in the actual instruction of the child.

9. Macomb 0-3 Regional Project: A Rural Child/Parent Service

Address	Telephone
27 Horrabin Hall Western Illinois University Macomb, Illinois 61455	309-298-1634

Program Description

The project serves handicapped children birth to age 3 years in the home setting. Home visits provide the child with learning activities ranging from sharing centers to water play.

* * *

10. MAPPS: Multi-Agency Project for Preschoolers

Address	Telephone
UMC 68 Utah State University Logan, Utah 84322	801-750-2000

Program Description

This project serves handicapped children who live in rural and remote areas. Parents are trained to work at home with their children, birth to age 3 years, while older children receive special curriculum materials and training within a preschool setting.

11. PEECH: Precise Early Education for Children with Handicaps

Address	Telephone
University of Illinois Colonel Wolfe School 403 East Healey Champaign, Illinois 61820	217-333-4894

Program Description

Children enrolled in the PEECH project are ages 3 to 6 years and have a wide range of ability levels. They are served in a classroom program along with children who have no special educational needs.

* * *

12. Peoria 0-3 Project: Replication of an Interdisciplinary Approach to the Early Education of Handicapped Children 0-3

Address	Telephone
320 East Armstrong Avenue Peoria, Illinois 61603	309-672-6358

Program Description

The project provides services to children birth to age 3 years. Project staff members work directly with parents, teaching them to implement educational strategies within the home. The project also operates a class for 18- to 36-month-old children.

13. The Portage Project: A Home Approach to the Early Education of Handicapped Children

Address

413 East Slifer Street
Box 564
Portage, Wisconsin 53901

Telephone

608-742-5342

Program Description

The project involves parents in the instruction of their child. Parents learn precision teaching techniques which involve continual assessment and recording data.

* * *

14. A Program for Early Education of Children with Handicaps

Address

301 Loop 11
Wichita Falls, Texas 76310

Telephone

817-322-6928

Program Description

The project provides weekly visits to the homes of handicapped children. In that setting, professional and paraprofessional staff members train parents to conduct daily learning activities with their children.

15. Programs for Children with Down's Syndrome

Address	Telephone
Experimental Education Unit, WJ-10 Child Development and Mental Retardation Center Seattle, Washington 98195	206-543-4011

Program Description

This preschool program serves children birth to age 6 years who have Down's syndrome. Educational and related services are available to the children, and parents receive training and other assistance.

* * *

16. A Regional Demonstration Program for Preschool Handicapped Children

Address	Telephone
Frank Hill School Yorktown Heights, New York 10598	914-962-2377

Program Description

The project serves a large number of young children who have a broad range of handicapping conditions. A home-based and/or center-based program is offered according to the age of the child. The home training component is modeled after the Portage Project design. The structured classroom program uses a prescriptive curriculum and positive social reinforcement.

17. Project RUN

Address	Telephone
P. O. Box 967 Oxford, Mississippi 38655	601-234-1476

Program Description

The goal of Project RUN is to prevent the institutionalization, or to facilitate the deinstitutionalization, of the young severely/profoundly multihandicapped children it serves. The treatment program involves one-to-one instruction using behavior modification techniques.

* * *

18. The Rutland Center: Developmental Therapy Model for Treating Emotionally Disturbed Children

Address	Telephone
125 Minor St. Athens, Georgia 30606	404-542-6076

Program Description

The project serves young children age 2 to 8 years who have severe emotional and behavioral disorders. The program employs a psycho-educational curriculum, developmental therapy (which focuses on behavior, communication, socialization), and preacademic skills.

19. Project SKI*HI

Address	Telephone
Department of Communication Disorders UMC 10 Logan, Utah 84322	801-750-1369

Program Description:

The project serves hearing impaired children birth to age 6 years and their families. The program provides a large base of services to improve the auditory and communicative functioning of each child.

* * *

20. The Teaching Research Infant and Child Center for Moderately and Severely Handicapped Children Classroom

Address	Telephone
Todd Hall Monmouth, Oregon 97361	503-838-1220 ext. 401

Program Description

The project serves preschool-aged handicapped children in a center-based program. The classroom employs a behaviorally based program which emphasizes individualized instruction and the use of teaching volunteers.

II. PERSUASIVE LITERATURE/MATERIALS

THE MATERIALS INCLUDED IN THIS SECTION PRESENT CONVINCING ARGUMENTS IN FAVOR OF EARLY INTERVENTION PROGRAMS. SOME ARTICLES PRESENT THE RATIONALE BEHIND OFFERING SERVICES TO YOUNG SPECIAL CHILDREN; OTHERS ARGUE THE EFFECTIVENESS OF EARLY INTERVENTION PROGRAMS, CITING THE RESULTS OF RESEARCH. PART A OF THIS SECTION INCLUDES PRINT MATERIALS; PART B CONTAINS OVERVIEWS OF TWO EASILY OBTAINABLE AUDIOVISUAL PRODUCTS ON SPECIAL SERVICES FOR YOUNG HANDICAPPED AND AT-RISK CHILDREN.

A. PRINT MATERIALS

1. Allen, K. E. Early Intervention for Young Severely and Profoundly Handicapped Children: The Preschool Imperative. AAESPH Review, 1978, 3, 30-41.

This article builds a case for early intervention for severely and profoundly handicapped infants and young children. The importance of involving parents, teachers, and clinicians in the educational program is a recurring theme of the article. Recommendations for including a variety of components in the preschool program are made.

2. Bronfenbrenner, U. Is Early Intervention Effective? Day Care and Early Education, 1974, 44, 14-18.

This article provides a synthesis of the longitudinal research on the effectiveness of various types of early intervention programs for disadvantaged preschoolers. Using the results of this research, the author has drawn a set of tentative conclusions regarding program characteristics which appear to be linked to program effectiveness.

The author reviews the research on four types of early intervention programs: group instruction, home-based tutoring, parent-child intervention, and ecological programs. The collective results of the research indicate that those children who were taught in groups or who received home-based tutoring made substantial IQ gains during the first year of intervention. These gains generally faded by the third or fourth year after program termination. Parent-child intervention was shown to be more effective and to have greater staying power than either group instruction or home-based tutoring. Ecological programs, or those intervention programs making "substantial changes in the environment of the child and his principal caretakers ... produce positive developmental changes considerably greater ... and more enduring than those achieved by the most effective intervention techniques when the home environment is left essentially unaltered" (p. 17).

The research shows that the earlier one begins in intervening the better, and the author recommends a long-term strategy of intervention with continuity from one phase to the next. At all ages, parent status must be considered central.

3. Caldwell, B. The Rationale for Early Intervention. Exceptional Children, 1970, 36(10), 717-726.

In this article, the author traces the origins of support for early intervention. She speaks of the intellectual and political climates during various points in history, relating them to early education decisions.

According to the author, early intervention receives inferential support from animal studies on the effects of early experience, developmental studies of children reared in different environments, and from conceptual analyses of the role of experience in development. Empirical support for early intervention is found as early as 1939 in the Skeels and Dye studies and more recently in the research on children who participated in early education projects. The author discusses the impact of inferential and empirical evidence on the support of early intervention efforts, giving attention to the contributions of various educators and researchers.

The author concludes the article with guidelines for other research and action plans.

4. Elardo, R. Lasting Effects After Preschool. Day Care and Early Education, 1980, 7(3), 13.

This article summarizes the findings of the study carried out by the Consortium for Longitudinal Studies on the effects of preschool programs on children from low-income families. Among the findings reported were:

1. The children who attended preschool showed IQ gains over controls that persisted up to three years after preschool.
2. Scores on fourth-grade math achievement tests were significantly higher for experimental than control children.
3. Children who attended preschool were significantly less likely to be enrolled in special education classes or retained in grade than control children.
4. Preschool experience pays for itself by reducing children's need for later costly special education.

A more complete discussion of this study is contained in the October 1977, final report to the Administration on Children, Youth and Families, by Irving Lazar et. al., referenced earlier in Section I of this document.

5. Hayden, A. H., & McGinness, G. D. Bases for Early Intervention. In E. Sontag, G. Smith, & N. Certo (Eds.), Educational Programming for the Severely and Profoundly Handicapped. Reston, VA: Council for Exceptional Children, 1978.

This 13-page article champions the cause for intervening very early -- under age 3 -- with handicapped children. The authors present nine reasons to provide early intervention programs and follow each with a well-developed rationale. Research from medical, educational, and psychological literature is cited as support. Addressed is the importance of a nurturing and stimulating environment, the probable existence of critical periods for learning, the progressive deterioration and "snowballing" effect of a handicapping condition, and the parents' need for support and respite. The authors justify intervening early not only on the basis of documented and apparent needs, but also on the basis that early intervention can minimize the effect of a handicap and prove cost efficient to society.

6. Hayden, A. H. & Pious, C. G. The Case for Early Intervention. In. E. B. Edgar & R. York (Eds.), Teaching the Severely Handicapped. A yearly publication of the Association for the Education of the Severely and Profoundly Handicapped (AAESPH) (Now TASH),(Vol. 4). Seattle: AAESPH, 1979.

This paper presents a compelling case for early intervention. Unlike many other arguments which justify early intervention primarily on the basis of its success and cost effectiveness, this 32-page article contends early education is the right and privilege of every handicapped child and the moral and ethical duty of the public.

The authors reply to critics of early education. Cited are the benefits of early education such as assistance to families involved in the difficult task of rearing a handicapped child and the increased dignity of the handicapped individual.

The authors consider two questions related to the provision of early intervention services: (1) How early is early? and (2) How well are we practicing early intervention? In response to the first question, the authors write, "Our answer... is that it is simply never too early to intervene, and that, from the data base we now have, it seems clear that urgently needed intervention should begin long before a child is born" (p. 12). In responding to the second question, the authors cite the lack of programs for children birth to age 3, the bureaucratic problems in providing such services, and our neglect of the families of handicapped children.

7. Kirk, S. A. General and Historical Rationale for Early Education of the Handicapped. In N. E. Ellis & L. Cross (Eds.), Planning Programs for Early Education of the Handicapped. New York: Walker and Company, 1977.

This 15-page chapter is an historical account of the growth of early education for the handicapped. The author describes many of the trends which have swayed the attitudes of government, health, and education professionals in developing programs for children with special needs. He begins with a brief discussion of the "nature-nurture" controversy and then discusses his own work and philosophy and that of Alfred Binet, Harold Skeels, Bernadine Schmidt, and Rick Heber.

8. Lazar, I. Early Intervention Is Effective. Educational Leadership, January 1981, 303-305.

This brief article reviews some of the evaluative literature on Head Start and similar programs. In criticizing the Westinghouse-Ohio University evaluation of Head Start, the author states there were numerous problems in the research design which made the outcomes of the research poor indicators of Head Start success. He subsequently reviews the results of the study carried out by the Consortium for Longitudinal Studies which was decidedly in favor of early intervention. This study found that children who attended preschool were less likely to be retained in grade or to attend special education classes. Though no specific curriculum was shown to be superior to another, the researchers found that a cluster of five interrelated program characteristics were linked to positive outcomes:

1. Age of intervention
2. Adult-child ratio
3. Number of home visits
4. Direct participation of parents
5. Services for the entire family.

Of these, parent involvement was considered to be most desirable. The author states that as a result of the intervention process, parents developed values which allowed them to encourage and reward their children's learning activities.

9. Lazar, I. Invest Early for Later Dividends. The Interstate Compact for Education, 1979, 28, 12-13.

This article interprets the importance of early intervention in respect to the economic significance. By pointing to the effectiveness of preschool programs such as Head Start and those investigated by the Consortium for Longitudinal Studies, the author shows how such programs pay for themselves in the end. Citing the Perry Preschool (Ypsilanti, Michigan) study as evidence, Lazar writes, "The benefits of the program -- measured in reduced need for high-cost special education services and in increased projected lifetime earnings for the children -- outweighed the costs by 236 percent" (p. 13). He suggests future funding should answer the need for preschool experiences and quality day care for children of working mothers.

10. Report to the Congress by the Comptroller General of the United States: Early Childhood and Family Development Programs Improve the Quality of Life for Low-Income Families (GA 1.13: HRD-79-40). Gaithersburg, MD: U.S. GAO Document Handling Facility, February 1979.

This 1979 report to Congress from the Comptrollers Office represents a broad analysis of the benefits of early childhood and family development programs. The 114-page document was initiated in part by a 1976 report which suggested there may be as many as 3.7 million high-risk children in this country under age 6. Contributing factors cited include increases in single-parent families, abuse and neglect, dependence on a welfare system, inadequate prenatal care, and poor nutrition. This report suggests early intervention produces lasting and significant developmental gains in children. The report recommends specific aspects of early intervention be required of all programs:

-- comprehensive health care and nutrition services;

-- an individualized approach to family needs and services;

-- parents as the first and most important educators of their children;

-- preschool/elementary school linkage efforts to enhance continuity of development;

-- influential roles of parents in program planning and management.

This report provides a brief but comprehensive review of past and present federal involvement in early education.

B. AUDIO-VISUAL MATERIALS

1. Calvin Communications, Inc. (Producers). The Fortunate Few.

This motion picture explains how early intervention benefits not only special children but also their parents, the public schools, and society. The film points out that during a special child's early years, remediation of handicaps often can be accomplished faster and at a lower cost than later intervention. It was designed to be viewed by educators, legislators, and others who influence the continuation of existing programs and the establishment of new ones.

The 16 mm color film (about 18 minutes) can be purchased from the producers: Calvin Communications, Inc.
1105 Truman Road
P..O. Box 15607
Kansas City, Missouri 64106

2. Technical Assistance Development System (TADS) and Western States Technical Assistance Resource (WESTAR) (Producers). Starting ... at the Beginning: An Update of Early Education for Young Exceptional Children.

This slide tape provides an update on preschool education geared for presentation to lay and interest groups. It traces the history of education for the handicapped from the time they were shut away and forgotten to the 1960s and 1970s when the country was calling for social reform through new legislation and on to the litigation for special populations of the 1980s. It discusses the formation of the federally supported Handicapped Children's Early Education Program (HCEEP) and its structure. Emphasis is given to efficacy and cost-benefit studies. This audiovisual presentation calls for the earliest intervention possible for a handicapped child.

The slide tape (about 14 minutes) is available for free loan from:

Handicapped Learner Materials
Special Materials Project
2nd Floor
624 Walnut Street
Indianapolis, Indiana 42604

III. ECONOMIC BENEFITS/COSTS OF SERVICES

THIS SECTION DEALS WITH THE COSTS AND COST BENEFITS OF PROVIDING SPECIAL EDUCATION SERVICES. PART A OF THIS SECTION INCLUDES ARTICLES THAT EXAMINE SPECIAL EDUCATION SERVICES AS A WHOLE. PART B INCLUDES ARTICLES THAT LOOK SPECIFICALLY AT EARLY INTERVENTION PROGRAMS. ADDITIONALLY, THE READER IS ENCOURAGED TO CONTACT JDRP-APPROVED PROJECTS FOR COST INFORMATION CONCERNING THEIR SERVICES.

A. GENERAL INFORMATION

1. Bernstein, D. C., Kirst, M. W., Hartman, W. T., & Marshall, R. S. Financing Educational Services for the Handicapped. Reston, VA: Council for Exceptional Children, 1976.

This 68-page manuscript was prepared in 1974 at the request of the U.S. Office of Education (now, Special Education Services). The purpose of the project was to determine the current status of special education finance and suggest considerations for planning future funding of special education programs. A literature review and a survey of the funding strategies of all states were used as a basis for this document.

Four central issues are discussed: (1) What services are being provided or should be provided handicapped children? (2) What is the cost of each of these services? (3) How should the overall level of funding be determined? and (4) What formulas will be used for the allocation of funds? Other specific issues addressed include categorical versus noncategorical funding, costs of personnel development and training, and costs associated with moving handicapped children into less restrictive environments.

Although the survey data reported are now out of date, the issues raised by these authors are still current. The authors conclude with a useful set of guidelines considered as decision criteria in the evaluation of special education delivery systems.

2. Dollars for Independence. Closer Look, Fall 1980, pp. 1, 3-5.

This article summarizes some recent literature on the economic implications of providing special education and vocational training to the handicapped. It builds a strong case for providing such educational opportunities by making clear that dollars spent on the excess costs of special education can be paid back to the government through income taxes, reductions in income maintenance payments, and institutional avoidance. The paper makes the point that a large portion of our federal budget is allocated to providing disability-related benefits which, in some cases, would not be necessary if the proper educational opportunities had been available. The author maintains that economics builds a strong case for providing special education programs, but the value of such services in contributing to the dignity and self-esteem of handicapped individuals alone is enough to justify the expenditures.

3. Hammerman, S., & Maikowski, S. The Economics of Disability: International Perspectives. New York: Rehabilitation International, 1981.

This publication, written in cooperation with the United Nations, is an international document that deals with the economics of disability and rehabilitation. Its 238 pages contain bibliographic summations of literature, a bibliography of 140 references, and a section with addresses of all publishers cited in the text. A number of topics are covered, including costs and benefits of disability prevention, costs of not providing rehabilitation services, and economic and social costs of disability.

The report shows that investment in well-organized, efficient rehabilitation services helps disabled persons become active members of society and also leads to savings of national funds since rehabilitation allows increased use of important human resources.

B. EARLY CHILDHOOD SPECIAL EDUCATION

1. Haring, N. G., & Hayden, A. H. Effectiveness and Cost-Efficiency of Early Intervention with Handicapped Children. Testimony before the Subcommittee on the Handicapped of the Senate Committee on Labor and Human Development, U.S. Senate, Washington, D.C., April 30, 1981.

By stating the birth statistics of handicapped children, citing the effectiveness of early intervention programs, and reviewing cost-effectiveness studies, the authors build a case for continued and increased financial support for early education programs for the handicapped. The authors cite the need for preventive programs as demonstrated by the disproportionately large numbers of handicapped infants born to mothers who receive inadequate prenatal care. The 24-page report documents the importance of locating and treating handicapped children early. The authors review research that proves early intervention with young handicapped children can offset the increased educational costs associated with special education services in the public schools. They review many of these cost-effectiveness studies and conclude "the costs of education for handicapped children increase as intervention with the handicapped child is delayed" (p. 9). The authors state community support for these programs is large -- shown by the fact that seed-money efforts of the federal government often are continued voluntarily via community funds.

2. Weber, C. U., Foster, P. W., & Weikart, D. P. An Economic Analysis of the Ypsilanti Perry Preschool Project. Ypsilanti, MI: High/Scope Educational Research Foundation, 1978.

This 70-page monograph represents the most extensive economic analysis of the effects of preschool intervention to date. Costs of the Perry Preschool Project, an intervention program for mildly retarded (IQ range 50-85) low-income children, were compared with real and projected long-term benefits. Three variables were included: cost of subsequent education services, projected lifetime earnings, and value of parents' release time. Results clearly documented the economic benefits of early intervention. Three specific benefits were found:

(1) Children in the preschool program required significantly fewer special education services (none required any form of institutional care) than did the control group (no preschool);

(2) Children in the preschool program were predicted to have higher lifetime earnings (based on educational progress, family background, and IQ scores) than the control group children;

(3) As a result of preschool attendance, parents were able to devote more time to their other children, to work ouside the home, and to leisure activities.

The authors suggest the analysis might be a conservative estimate of the economic benefits of early intervention, since conclusions are based on data through the eighth grade. It may be that early intervention will affect as yet undocumented variables such as crime rate and welfare participation.

IV. LITERATURE REVIEWS/COLLECTIONS OF INFORMATION

LIKE OUR COLLECTION, OTHERS HAVE ATTEMPTED TO COLLECT A LARGE BODY OF INFORMATION ON THE BENEFITS OF EARLY INTERVENTION, PUT IT INTO MANAGEABLE FORM, AND MAKE IT AVAILABLE TO OTHERS. IN THIS SECTION, WE INCLUDE NARRATIVES (PART A) AND LISTINGS (PART B) OF SUCH INFORMATION.

A. REVIEWS

1. Garland, C., Stone, N. W., Swanson, J., & Woodruff, G. (Eds.), Early Intervention for Children with Special Needs and their Families. Seattle: Western States Technical Assistance Resource (WESTAR) of the University of Washington, 1981.

This 40-page report was researched and written by members of INTER-ACT: The National Committee for Services to Very Young Children with Special Needs and Their Families. It was prepared as a position paper to reflect the importance of comprehensive early intervention services, to serve as a resource, and to advocate support at all levels of government for providing services beginning at birth for children with special needs and their families.

The paper is divided into four major sections. Section one reviews research demonstrating the effectiveness of intervention programs and their impact on the development of handicapped and at-risk youngsters. Section two describes the needs of parents of handicapped children, shows the effect of services on the family, and presents a rationale for the participation of parents in early intervention programs. Section three presents data on the costs and cost effectiveness of intervention programs. Section four outlines the characteristics of a comprehensive service delivery system and includes recommendations for actions at various levels.

2. A Review of Literature on the Long-range Effects of Early Intervention on Children. NASDSE and WESTAR: Washington, DC, 1980.

This eight-page paper, prepared by the National Association of State Directors of Special Education (NASDSE) for the Indiana Department of Public Instruction, reviews many of the significant studies dealing with the effectiveness of early intervention. The paper is divided into two sections: Early Research and Research of Early Intervention Programs Initiated in the 1960s and Early 1970. Two studies, the landmark Skeels & Dye research (1930s) and the Kirk research (1958) on the effects of preschool on mentally retarded children are included in the first section. The second section reports the research carried out by a number of investigators covering a broad base of topics dealing with the effectiveness or benefits of early intervention.

B. COLLECTIONS OF INFORMATION

1. Antley, T. R., & DuBose, R. F. A Case for Early Intervention: Summary of Program Findings, Longitudinal Data, and Cost-Effectiveness. Seattle: Model Preschool Center Outreach Program of the University of Washington, 1981.

This seven-page report deals with three topics. The first section covers program effectiveness and is set out in chart format. Nine programs are outlined in terms of the population served, the service delivery model, research findings, and cost. The second section consists of short narrative descriptions of four longitudinal studies, giving information on achievement, IQ gains, and school placement of subjects, among other descriptive data. The third section outlines the financial benefits of early education as seen through the research of several projects. The report was prepared to be presented to funding agents, school administrators, legislators, parents, and others.

2. Educational Programs that Work (8th ed.). San Francisco: Far West Laboratory for Educational Research and Development, 1981.

This 288-page catalogue contains descriptions of those educational programs which have earned the endorsement of the U. S. Department of Education's Joint Dissemination Review Panel (JDRP). To obtain such validation, proof of cognitive and affective gains of project enrollees must be presented by each project for scrutiny and approval by a majority of the attending panel members.

Information given on each project includes a description of the target population, program features, and evidence of effectiveness. Brief guidelines for replication of the program are given, along with financial requirements and services available from project staff. (See Section I Part B of this publication for a list and brief description of JDRP-approved programs in the Handicapped Children's Early Education Program.)

3. The Journal of the Division for Early Childhood, Vol. 4, December 1981.

This issue of the Journal, sponsored by Division for Early Childhood of the Council for Exceptional Children (CEC), is devoted to efficacy studies of early intervention programs for young special children. The volume is edited by Merle Karnes. It contains nine papers which were presented at the 1980 annual conference for project directors of the Handicapped Children's Early Education Program (HCEEP) and other early childhood special educators. These papers include information related to program effectiveness and cost-efficiency data. Additionally, there is an overview section at the beginning of this volume and a listing of ERIC resources at the conclusion.

V. FOUR EARLY CHILDHOOD RESEARCH INSTITUTES FUNDED BY SPECIAL EDUCATION SERVICES, U.S. DEPARTMENT OF EDUCATION

THIS SECTION INCLUDES ABSTRACTS ON FOUR EARLY CHILDHOOD RESEARCH INSTITUTES (ECRIs) WHICH HAVE THE MISSION TO DISCOVER AND DISSEMINATE KNOWLEDGE THAT CAN BE USED TO IMPROVE SERVICES AND PROGRAMS FOR EXCEPTIONAL YOUNG CHILDREN AND THEIR FAMILIES. THE INSTITUTES ARE FUNDED BY SPECIAL EDUCATION SERVICES (SES), U.S. DEPARTMENT OF EDUCATION. THE ABSTRACTS ARE REPRINTED FROM SES'S 1981-82 HANDICAPPED CHILDREN'S EARLY EDUCATION PROGRAM OVERVIEW & DIRECTORY, PUBLISHED BY TADS AND WESTAR.

A. ABSTRACTS

1. Research on the Early Abilities of Children with Handicaps (Project REACH)

Address: UCLA Department of Education
405 Hilyard Avenue
Los Angeles, California 90024

Phone: 213/825-8381

Fiscal Agency: University of California, Los Angeles

Directors: Barbara K. Keogh & Claire B. Kopp

Major Objectives:

REACH's long-term goal is to characterize competence of handicapped and at-risk children between 1 and 6 years of age. Since individual variability in competence characterizes this group of children, as it does others, it is essential to delineate the development of variability and the factors that mediate effectiveness. This delineation is the focus of many REACH studies.

Major Activities:

Project REACH is conducting studies in three areas: infancy, preschool, and the effects of a handicapping condition over time. The infancy studies focus on attention and self-control in young children, while the preschool studies focus on temperament, social development, attention, attribution and motivation in young children. As findings emerge, dissemination activities will increase; dissemination will be a major emphasis in 1981-82.

Accomplishments During 1981:

Results of the infancy studies indicate a developmental progression in the use of sustained attention and self-control, interrelated individual variability and differential patterns of responses for normally developing and handicapped infants. Data collection and preliminary analysis have been completed for the majority of the preschool studies, including the collaborative studies. Data collection for the longitudinal study has proceeded on schedule. All data have been coded for the first cohort through Time 4 and for the second cohort through Time 3. Exit interviews have been conducted with 15 families.

Dissemination activities at REACH have measurably increased, and a REACH publications list is available for distribution. Dissemination activities directed toward parents and clinicians have continued through newsletter and local radio announcements. A brochure outlining available staff speakers is currently in progress, and Project REACH hosted a mini inter-institute conference on dissemination.

Resources Available:

- A Bibliography of Screening and Assessment Measures for Infants by Kim L. Johnson and Claire B. Kopp, a 36-page bound booklet for use by staff
- A REACH Publication List is available for other REACH publications

2. Kansas Research Institute for the Early Childhood Education of the Handicapped (Early Childhood Institute)

Address: The Institute is a collaborative effort of two departments:

Department of Human Development
130 Haworth Hall
University of Kansas
Lawrence, Kansas 66045
Phone: 913/864-4840

Department of Special Education
377 Haworth Hall
University of Kansas
Lawrence, Kansas 66045
Phone: 913/864-4954

Fiscal Agency: University of Kansas

Directors: Judith M. LeBlanc & Edward L. Meyen

Coordinators: Ann Rogers-Warren, Research Coordinator; Sidney Roedel, Coordinator of Development

Major Objectives:

The major emphasis of the Institute is to develop or improve methods of identifying and intervening with children at risk for a handicapping condition. The Institute's research is united by a common question: Why do some children develop successfully and others do not? Researchers are seeking to identify 1) what characteristics or patterns of behavior in a child might serve as signals that the child needs intervention, 2) how the child's environment affects his or her development, and 3) how procedures for documenting and assessing the child's progress can be developed. In addition, the Institute is integrating the findings from all the studies.

Major Activities:

To fulfill its objectives, the Early Childhood Institute is conducting research in the following four areas:

1. Developmental Guides to Intervention: developmental and environmental correlates of receptive language in the first year of life (Horowitz).
   - Instrument procedures sensitive to small increments in sensory/motor acquisition for normal and severely handicapped infants and young children (Guess, Warren, and Rues).
2. Ecological Guides to Intervention: child-family interactions associated with the etiology and remediation of family dysfunction (L. Embry).
   - Child-child interaction, including the social variables affecting the play behaviors of handicapped and nonhandicapped children (Peterson).
   - Development of social skills in handicapped preschool children (Cooper).
   - Child-teacher interactions, their patterns, content, and modification (Allen).
   - Child-setting interactions, including the transition from therapeutic to normal classrooms (Baer, Rowbury, Fowler and D. Embry).
   - Strategies used by mothers of handicapped, at-risk and normal children to teach language (Rogers-Warren).

3. Assessment Guides to Intervention
   - Assessment-guided intervention based on a discrimination learning model (Etzel).
   - Role of instructional variables in identifying, prescribing, and implementing optimal teacher procedures (LeBlanc).
4. Integrated Research
   - Relationships among eco-behavioral and emographic measures obtained by Institute investigators (Foster and Ruggles).
   - The Institute is conducting longitudinal studies in the following areas: receptive language in infants, parent-child interactions in the home, sensorimotor development in SMH and normal infants and children, and verbal interactions between mothers and their children.

Accomplishments During 1981:

The Institute has completed Volume I in the series "Quantitative Assessment of Motor and Sensory/Motor Acquisition in Handicapped and Non-handicapped Infants and Young Children." The 474-page manual, Assessment Procedures for Selected Developmental Milestones, describes the measurement of motor and sensorimotor acquisition in the following areas: visual behaviors (fixation, tracking, and scanning); reach, grasp, release, and transfer skills; head control; sitting behaviors; and mobility behaviors (rolling, crawling and creeping, and standing and walking).

A number of completed studies have produced findings in the following areas: 1) receptive language development (infant attention to intonation contour, infant attention to facial features, integration of audio-visual displays); 2) the relationship between neonatal behavior and environmental interactions; 3) the ability of preschool children to perform number-numeral correspondence tasks in various formats; 4) the behavioral effects of storybooks on normal, at-risk and handicapped children; 5) measurement of visual scanning by normal, retarded, and at-risk children; and 6) various aspects of reading assessment and intervention (resulting in new procedures for children who do not acquire chaining skills or word identification skills).

Staff members have presented at professional conferences on the following topics: group parent training, receptive language in infants, language generalization, social interaction of normal and handicapped children, transition and follow-up techniques for children entering public school from a special classroom, errorless learning procedures, assessment of at-risk and handicapped infants, and teaching techniques for increasing positive social interactions of disruptive children.

Resources Available:

- Training and/or workshops on neonatal assessment, designing effective parent programs, academic programming for handicapped preschool children and language remediation for preschool children
- Comprehensive literature reviews on the following topics: receptive language of infants, social variables affecting early development, physical and ecological variables, direct instructional procedures, design criteria for instructional materials, learning assessment, instructional control variables, dissemination of research findings, infant operant conditioning and motor development of severely and multiply handicapped children

- Series of working-paper publications
- Consultative services on child management (individual and group)
- Observational codes (classroom- and home-based) developed at the Institute
- Strategies for the management of research data
- Nontechnical articles describing various programs and research at the Institute
- Practical paper series
- Bibliographies

Specific information on products and services is available from the Institute.

3. Institute for the Study of Exceptional Children

Address: The Institute is a collaborative effort of two research-service organizations:

Institute for the Study of Exceptional Children
Educational Testing Service
Princeton, New Jersey 08541
Phone: 609/734-1056

St. Lukes-Roosevelt Medical Center
Department of Pediatrics
428 West 49th Street
New York, New York 10019

Fiscal Agency: Educational Testing Service (ETS)

Director: Michael Lewis, Director of Institute

Coordinators: Jeanne Brooks-Gunn, Associate Director/Coordinator of Research Unit; Nathan Fox, Coordinator of Detection Unit; Richard Brinker, Coordinator of Intervention Unit; Louis Z. Cooper, Chairman of Pediatrics Department, St. Lukes-Roosevelt Medical Center

Major Objectives:

The Institute is designed to meet the growing need for productive and effective solutions to the problems of handicapped and at-risk children and consists of four units: detection, research, intervention and evaluation, and products and delivery. In 1982, the Institute will continue to develop effective techniques for the early identification of children at risk for developmental dysfunction and to design broader and more sensitive assessment tools for use with known handicapped children. An ongoing activity is to collect information on the development of normal, handicapped, and at-risk infant populations.

As part of the intervention and evaluation unit, the Institute is developing effective methods of intervention with handicapped infants and conducting a systematic evaluation of those methods already developed. Furthermore, the Institute will continue to measure the relationship between the handicapped infant's development and the child's larger environment.

Dissemination activities for the Institute include developing media materials on handicapped and at-risk development for use by pediatricians, special parents and educators of dysfunctional infants. Materials will be made available on the educational and intervention techniques developed at the Institute, and the staff will continue to be involved in workshops and conferences.

Major Activities:

At St. Lukes-Roosevelt Medical Center, The Institute staff is conducting a longitudinal study of infants with low birth weights in order to detect those at risk. In addition, the Institute staff is collecting data on the cognitive and social development of handicapped infants and data on their socioemotional, perceptual-cognitive and linguistic functions. Other

activities are to develop complex communicative skills from existing skills of young handicapped children, to evaluate integrated educational services for severely handicapped children and to apply research knowledge about normal infant development to handicapped infants. As part of its training program, the Institute will continue to teach predoctoral and postdoctoral students.

Dissemination activities for the Institute include developing two films on handicapped and at-risk children for use by pediatricians, parents and educators. The Institute staff is completing the data gathering for the Competency Assessment Profile, preparing curriculum modules based on that profile and designing procedures for its use. Furthermore, the Institute is developing intervention programs and curricula around process ("Learning to Learn") skills for parents and teachers.

Accomplishments During 1981:

The Institute staff have developed a number of curricula and contingency products for use with handicapped infants and their parents. Among these are: 1) a Handbook on the Competency Assessment Project, 2) contingency devices for use with the "Learning to Learn" Curriculum within Intervention Unit, 3) contingency products for use with handicapped infants, and 4) The Handicapped Infant: New Directions in Research and Intervention (Michael Lewis and Jeanne Brooks-Gunn, McGraw Hill, in press). The Institute staff are also active in disseminating research results or reports at professional meetings and have participated in 15 special education conferences, several Inter-institute meetings and presentations at ten medical centers and pediatric departments. In addition, the staff conducted a lecture series on special education and early childhood at Educational Testing Service.

Research completed to date includes the collection and analysis of data for the Competency Assessment Profile project, analysis of data collected to determine the interrelationship of skills as a function of both age and diagnostic category and the collection of data on 90 high-risk infants through the first year of life in the Identification Project. Data collection on neonates in the Identification Project has begun. As part of the Research Unit, the Institute staff have completed studies on linguistic, socioemotional, attentional and contingency skills.

Resources Available:

The following are available from Michael Lewis or Jeanne Brooks-Gunn, Institute for the Study of Exceptional Children, Educational Testing Service, Princeton, New Jersey 08541:

- Programs and Projects: Institute for the Study of Exceptional Children
- List of Institute Publications
- Selected Institute Reprints

4. Carolina Institute for Research on Early Education for the Handicapped (CIREEH)

Address: Frank Porter Graham Center
Highway 54, 071A
Chapel Hill, North Carolina 27514

Phone: 919/966-4121

Fiscal Agency: Frank Porter Graham Child Development Center

Principal Investigator: James Gallagher

Assistant Directors/Coordinator: Craig Ramey and Rune Simeonsson, Associate Directors; Marie Bristol, Assistant Director; Jean Gowen, Coordinator

Major Objectives:

CIREEH's major objectives are to develop a curriculum for severely and multiply handicapped infants developmentally aged birth to 24 months, to create new approaches for assessing the developmental progress of moderately, severely and multiply handicapped children and to assess the effectiveness of two types of intervention programs for children at risk for environmentally caused mental retardation. In addition, the Institute is conducting research to understand further how interventionists can best help families of handicapped and at-risk children facilitate their children's education. This research comprises projects which attempt to clarify both theoretical and operational definitions of preschool mainstreaming, to identify characteristics of mainstreamed preschool children and to understand parental perspectives on these programs. Through research units, CIREEH staff will study parent involvement with preschool programs, and they will examine the network of family relationships that influence the adaptive behavior of the high-risk and handicapped child as well as the relationship of that child's family with education programs. Finally, CIREEH intends to identify the characteristics of successful parents of young handicapped children and the support systems used by those families.

Major Activities:

During 1981, CIREEH continued to study the education of young handicapped children and children at risk for mild handicaps. Efforts included intervention and descriptive studies and the development of curriculum materials and assessment techniques.

The Carolina Approach to Responsive Education (Project CARE) is comparing the effects of two types of early education on the development of children at risk for mild mental retardation due to environmental factors. The project randomly assigned families to a home education group, a home education plus day care group and a control group. The day care group attends a full day, five-day-a-week developmental program. A home visitor provides parent education during biweekly visits. All three groups receive nutritional supplements. The project assesses mother-child interaction and child progress on a regular basis. The Curriculum Development project is developing and testing a curriculum for moderately, severely and multiply handicapped infants developmentally aged birth to 24 months.

Beyond these projects, CIREEH descriptive studies are examining a wide range of factors thought to affect the early education of handicapped children. Research topics include parent involvement in preschool programs for handicapped children; characteristics of families of children at risk for environmentally caused mental retardation; the roles and characteristics of parents in mainstreamed programs; the assessment of moderately, multiply and severely handicapped children; the relationship of family characteristics to adaptive behavior in the classroom; and characteristics and support systems of successful parents of handicapped children. CIREEH staff are also developing instruments and techniques for assessing a number of child and family characteristics.

Accomplishments During 1981:

CIREEH field-tested the curriculum for moderately, severely and multiply handicapped infants developmentally aged birth to 12 months. This curriculum is available in pre-publication draft form for research validation. The Institute is currently field-testing the curriculum for similarly handicapped toddlers, developmental ages 12 to 24 months.

The Carolina Record of Infant Behavior (CRIB), an instrument for assessing and predicting the development of severely handicapped infants, has been tested with over 300 children. CIREEH developed experimental forms to assess the social assets of handicapped children, parental concepts about infant development, parental information needs, family roles and the cognitive development of severely and multiply handicapped children. Also available are experimental forms of measures designed to survey parent involvement in preschool programs and the characteristics of mainstreamed programs.

CIREEH prepared a 1981 Status Report on preliminary results from the studies of parent involvement in preschool programs for handicapped children, mother-child interaction, parent perspectives of mainstreamed preschool programs, sources of support for parents of handicapped children, the relationship between characteristics of families and classroom behavior, and effects of day care and parent education.

Resources:

- Carolina Curriculum for Handicapped Infants (birth to 12 months)
- Carolina Record of Infant Behavior: Experimental Form
- CIREEH Status Report: Technical report on the Carolina Institute for Research on Early Education for the Handicapped
- CIREEH Abstracts: List of publications available from the Carolina Institute for Research on Early Education for the Handicapped